

**Blacksburg/Christiansburg/Montgomery Area
Metropolitan Planning Organization**

MPO Freight Study

Prepared by the NRVPDC

Acknowledgements/Disclaimer

This report was prepared by the New River Valley Planning District Commission in cooperation with and for the Blacksburg/Christiansburg/Montgomery Area Metropolitan Planning Organization. This Report utilizes data from the U.S. Department of Transportation (USDOT), The Federal Highway Administration (FHWA), and the Virginia Department of Transportation (VDOT). The contents of this report reflect the views and opinions from the staff of the New River Valley Planning District Commission and various Stakeholders. The NRVPC, and MPO Staff are not responsible for the accuracy of data. The contents of this study do not necessarily reflect the view or policies of the USDOT, FHWA, and/or VDOT. This report does not constitute a standard, specification, or regulation. Acceptance of the report as evidence of fulfillment of the objectives of this planning study does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional Studies may be necessary.

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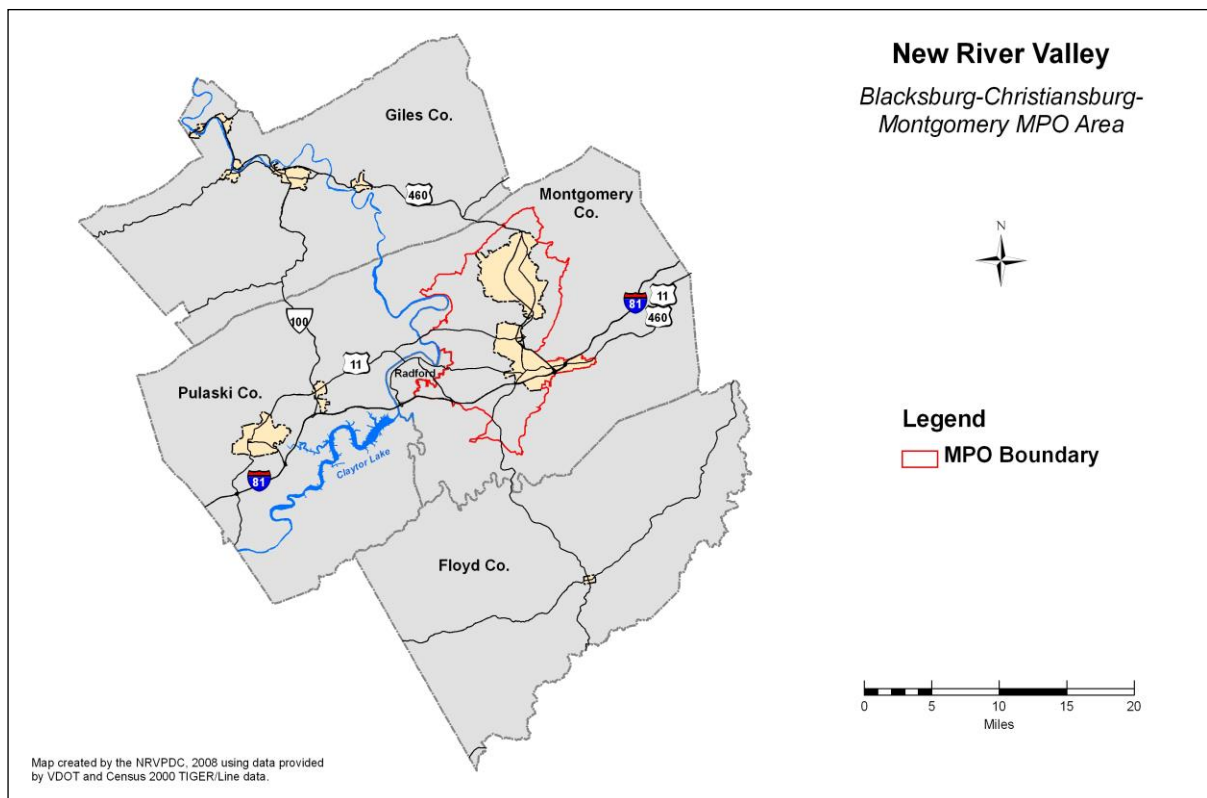
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Introduction

The New River Valley (NRV) and the Blacksburg-Christiansburg-Montgomery Area Metropolitan Planning Organization particularly, have a true need for the continued development of freight transportation systems that provide safe and reliable infrastructure and the ability adapt to the demands of a growing region. The New River Valley is defined as the Counties of Floyd, Giles, Montgomery, and Pulaski; the City of Radford, while the primary focus of this report is intended for Blacksburg-Christiansburg-Montgomery (MPO) Area.

The New River Valley region is located in Southwest Virginia, and the Blacksburg-Christiansburg-Montgomery MPO Area is approximately 30 Miles from Roanoke Virginia, Exhibit 1 shows this location. The region is bisected by U.S. Interstate Highway 81, and includes U.S. Route 11 and U.S. Route 460. In addition rail service is primarily provided by Norfolk Southern Corporation. The region includes the New River Valley Airport (located in Pulaski County) featuring international flights with U.S. Customs Support, at Port #1412 and FTZ #238. The NRV Region is within five hundred miles of Atlanta, Louisville, Cleveland, Washington DC, Pittsburg, and numerous other cities and economic hubs.

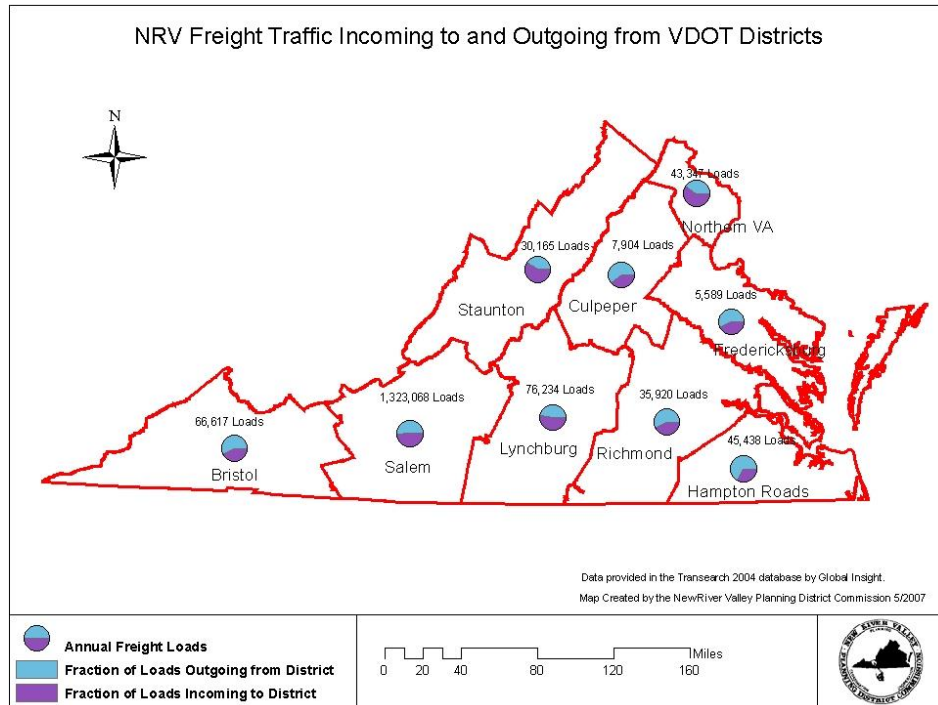
Exhibit 1: MPO Area within the NRV Region



New River Valley Regional Freight Profile

The New River Valley region and the Blacksburg-Christiansburg-Montgomery MPO Area are located in the Salem Virginia Department of Transportation (VDOT) District, adjacent to the Bristol District. As Exhibit 2 shows the Salem District encompasses the largest total of all freight loads in the Commonwealth of Virginia. Additionally, the ratio of incoming to outgoing freight is nearly even, with a slight advantage of outgoing freight.

Exhibit 2: NRV Freight Traffic in relation to VDOT Districts.



Within in the Salem District Montgomery County proves to be one of leaders in the state for the number of freight loads, both incoming and outgoing. These figures are shown on Exhibits 3 and 4. For exported loads, Montgomery County is the leader in the state with Franklin, Roanoke, Botetourt, and Fairfax Counties, and the cities of Roanoke, Salem and Lynchburg, being close. The vast majority of Virginia cities and counties only handle a fraction of freight loads compared to Montgomery County (45 % of combined counties and cities in Virginia have no more than 534 loads shipped as opposed to Montgomery County with over 16,321 loads shipped).

Imported loads to Montgomery County and Pulaski County are comparable, while the cities of Roanoke and Lynchburg are close as found in Exhibit 4, with a vast majority of the state importing only a fraction of the loads when compared to Montgomery County.

Exhibit 3: Loads of Freight Shipped from the MPO in Virginia context

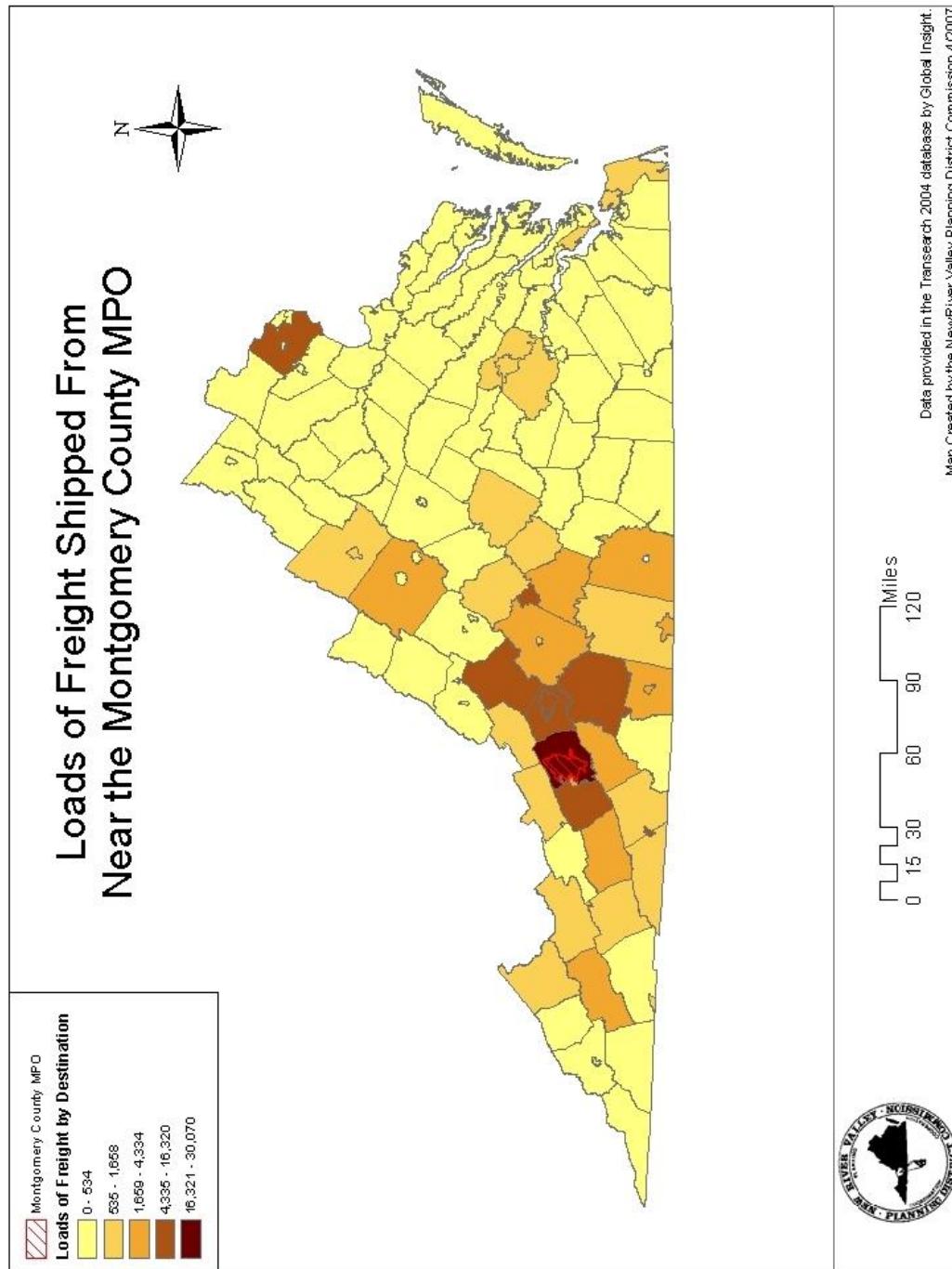
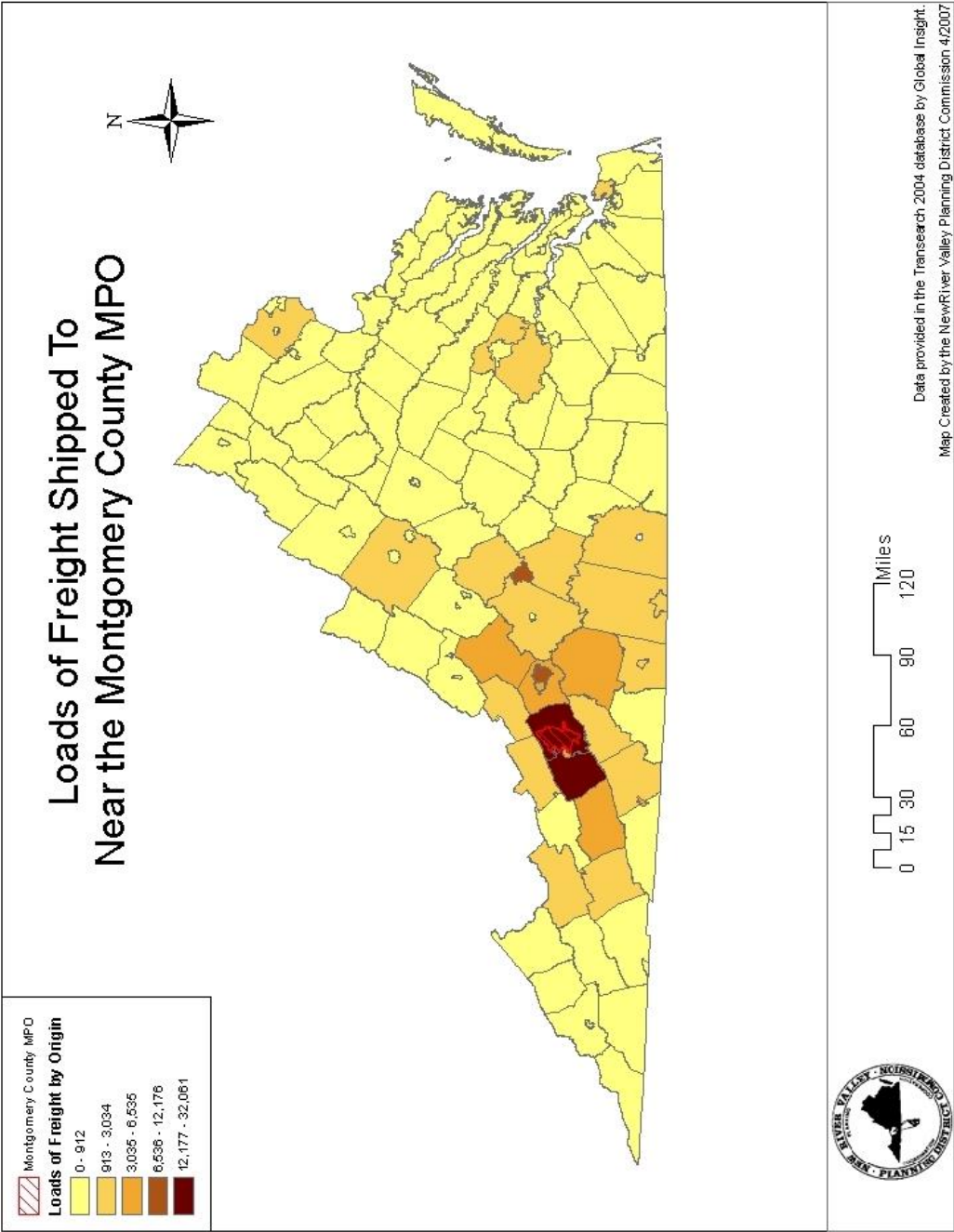


Exhibit 4: Loads of Freight Shipped to the MPO in Virginia context



With such a large influx of freight coming into the area it is pertinent to determine effective routes and modes of transportation to provide a safe and reliable system to both industry and citizens.

Commodity Shipments in the Region

The Blacksburg-Christiansburg-Montgomery MPO Area does have a difference in the number of exported commodities versus the number of commodities imported. This relationship is shown in Exhibits 5 and 6. These Exhibits show more loads are being brought into Montgomery County (10056 more loads) than being sent out of the County. However more tonnage (627,080.54 more tons) is created within Montgomery County. In addition, the value of commodity shipments is higher within Montgomery County with over 1.4 Billion U.S. Dollars worth of commodities shipped.

Exhibit 5: Freight shipments originating within Montgomery County.

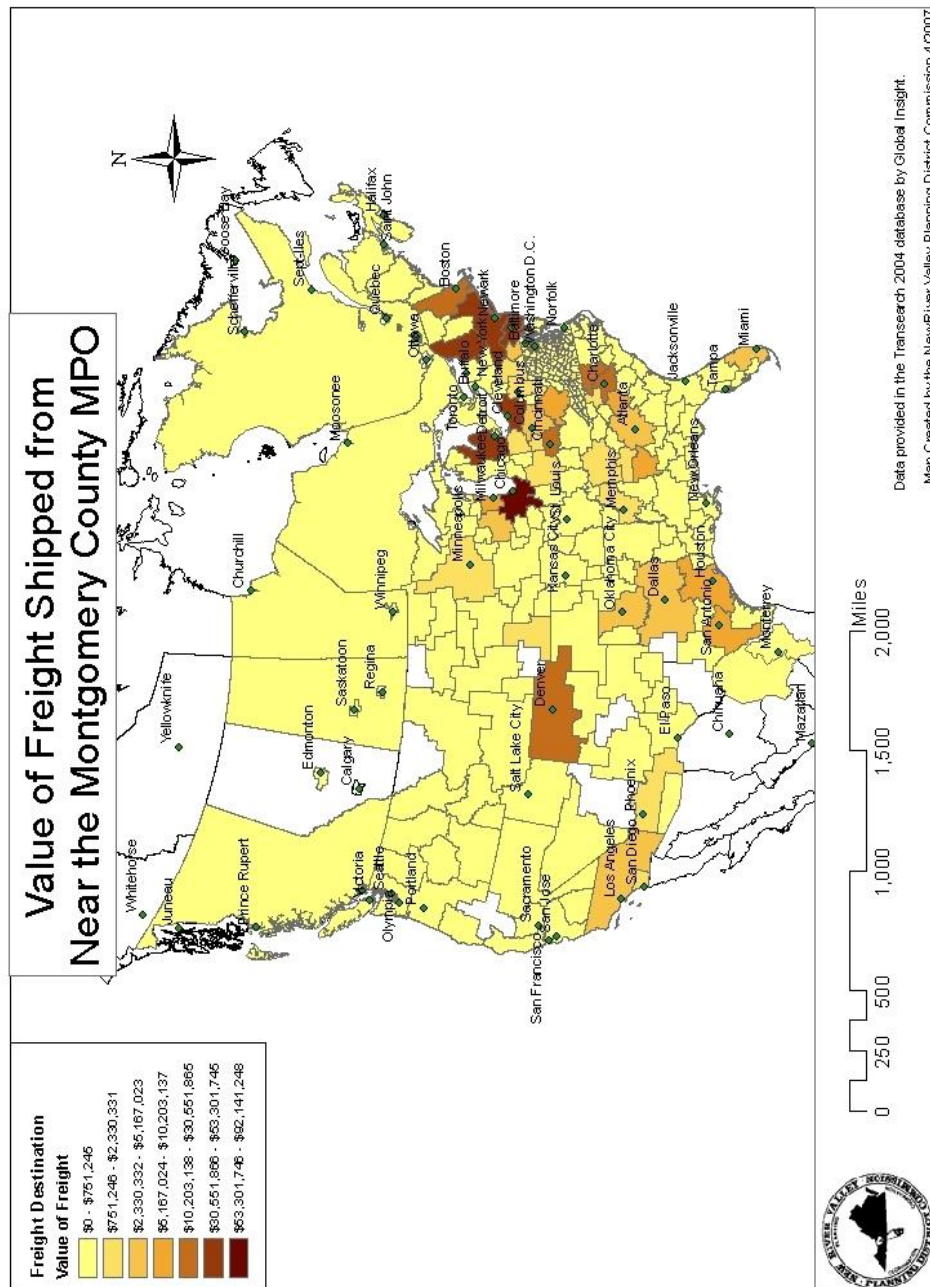
Commodity	Loads	Value	Tons	Rank (Loads)	(Tons)	(Value)
Shipping Containers	91,898	\$0.00	0.00	1	26	26
Nonmetallic (Aggregate) Minerals	64,260	\$9,719,968.88	1,352,958.85	2	1	21
Clay,concrete,glass Or Stone	23,423	\$24,083,933.27	366,203.56	3	2	13
Farm Products	13,261	\$36,592,169.98	279,207.85	4	3	8
Secondary Traffic	13,159	\$1,767,379,086.46	272,041.86	5	4	1
Lumber Or Wood Products	4,859	\$29,001,136.64	122,300.44	6	5	11
Food Or Kindred Products	3,059	\$54,453,174.26	69,308.84	7	7	5
Petroleum Or Coal Products	2,968	\$15,925,599.37	70,690.19	8	6	18
Transportation Equipment	1,555	\$201,905,010.50	21,939.85	9	10	3
Electrical Equipment	1,522	\$373,001,500.72	25,352.01	10	9	2
Totals	225,171	\$2,882,019,650.30	2,681,908.73			

Exhibit 6: Freight shipments transported to Montgomery County.

Commodity	Loads	Value	Tons	Rank (Loads)	(Tons)	(Value)
Shipping Containers	120,792	\$0.00	0.00	1	23	23
Clay,concrete,glass Or Stone	61,353	\$162,771,597.71	966,870.81	2	1	3
Nonmetallic (Aggregate) Minerals	33,362	\$3,991,615.69	702,418.16	3	2	15
Food Or Kindred Products	3,811	\$68,187,372.11	87,517.37	4	3	6
Farm Products	3,624	\$49,302,215.65	75,463.37	5	4	9
Transportation Equipment	3,167	\$249,462,391.25	42,411.45	6	6	2
Lumber Or Wood Products	2,785	\$16,339,978.77	70,296.80	7	5	13
Rubber Or Misc Plastics	1,262	\$60,843,303.37	14,993.65	8	10	7
Electrical Equipment	1,042	\$482,420,586.85	17,413.56	9	8	1
Primary Metal Products	999	\$56,589,224.09	24,640.70	10	7	8
Totals	235,227	\$1,455,858,516.06	2,054,828.19			

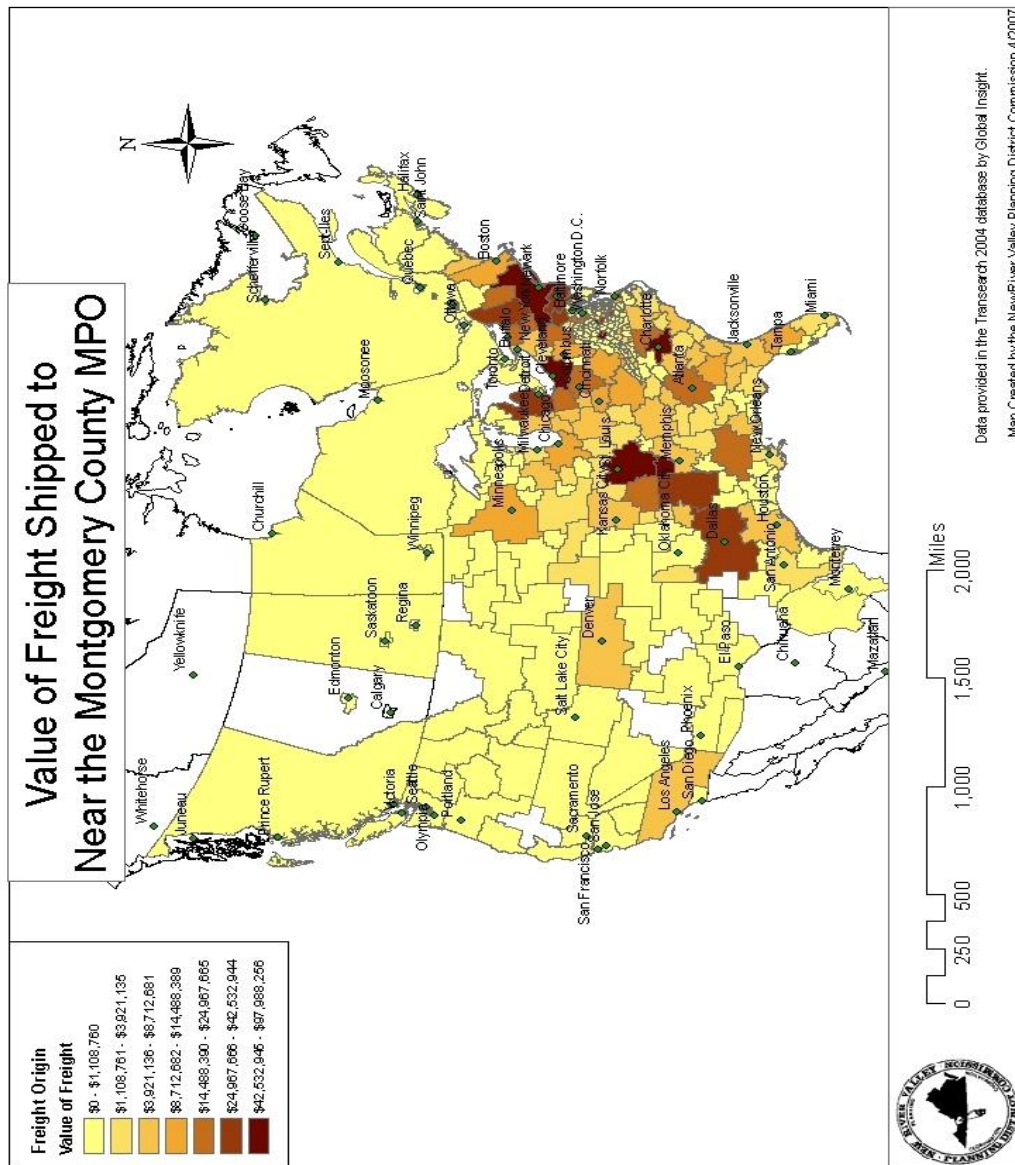
Freight that is shipped from the Blacksburg-Christiansburg-Montgomery Area MPO is going to all areas of the County and is shipped internationally. Areas receiving the highest value of Freight appear to be in the North East and around the Great Lakes Area.

Exhibit 7: Value of Freight Shipped from Montgomery County in North America



Freight that is shipped to the Blacksburg-Christiansburg-Montgomery Area MPO is coming from similar areas as the outgoing freight. Areas receiving the highest value of freight appear to be in the North East, the South East, around the Great Lakes, and portions of the Midwest.

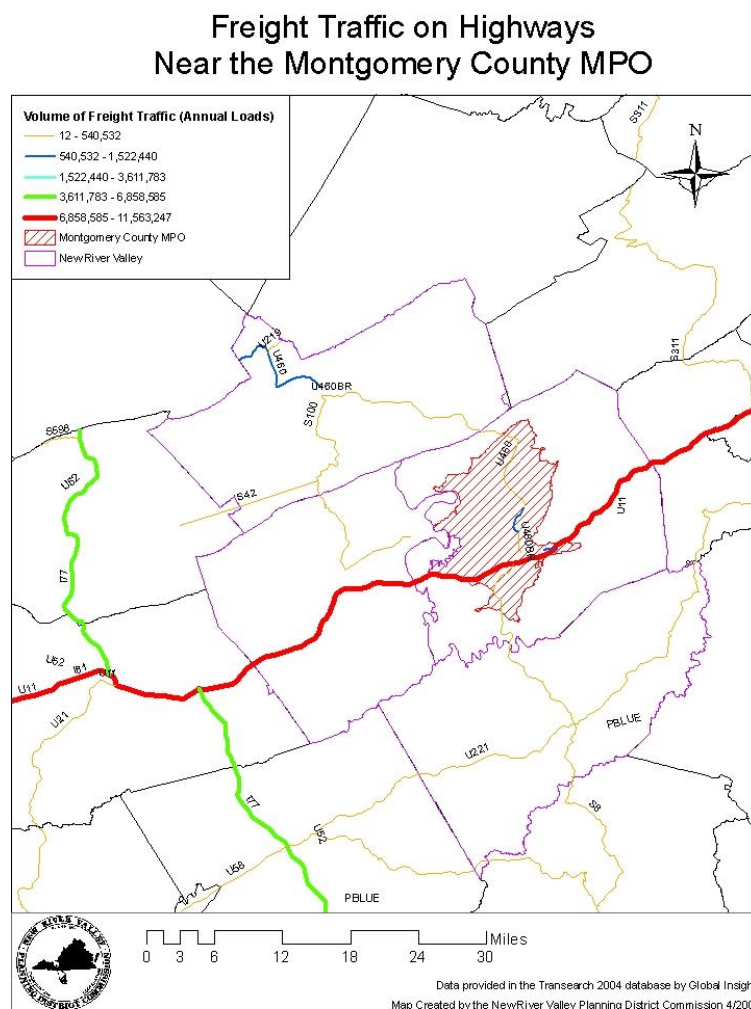
Exhibit 8: Value of Freight Shipped to Montgomery County in North America



Truck Freight in the Region

The majority of freight is handled via primary roads, be it from origin to final destination or as a part of the transportation process. As a result the need for a system capable of handling freight movement is significant. The New River Valley region consists of all Federal Classifications of roads to include Interstate Highway, Arterial, Collector, and Local. There is a direct correlation between the classification of a roadway and the volume of freight traffic it handles. Exhibit 9 expresses this relationship, with U.S. Interstate 81 having the largest volumes, followed by U.S. Highways. However there is an exception for U.S. Route 460 which has a freight volume that fluctuates depending on location. This is due in large part, to the location of industrial parks (primarily the Falling Branch Industrial Park, Christiansburg Industrial Park, Blacksburg Industrial Park and the Virginia Tech Corporate Research Center) and access to the Interstate. In Giles County Celanese and AEP have significant freight movements to U.S. Interstate 77 via U.S. Route 460 in Princeton W.V.

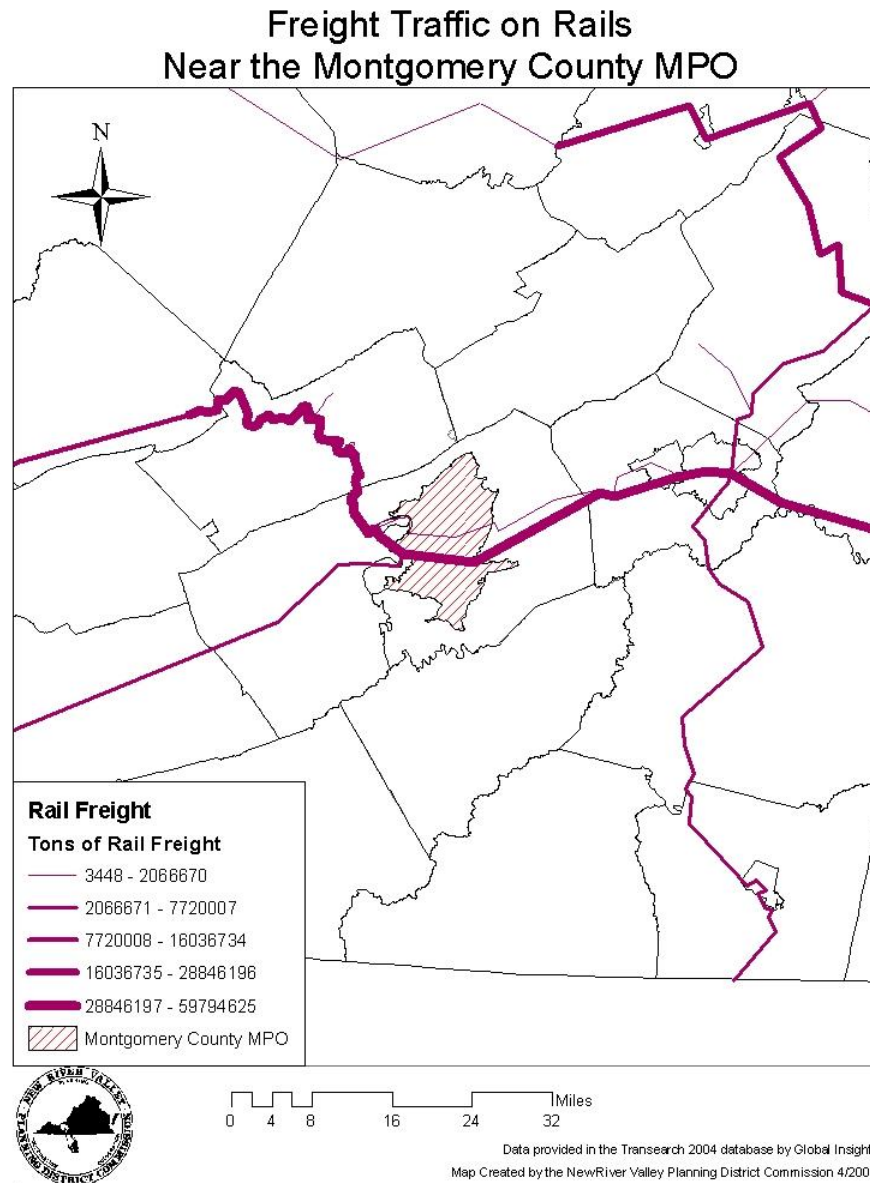
Exhibit 9: Freight Traffic on Highways



Rail Freight in the Region

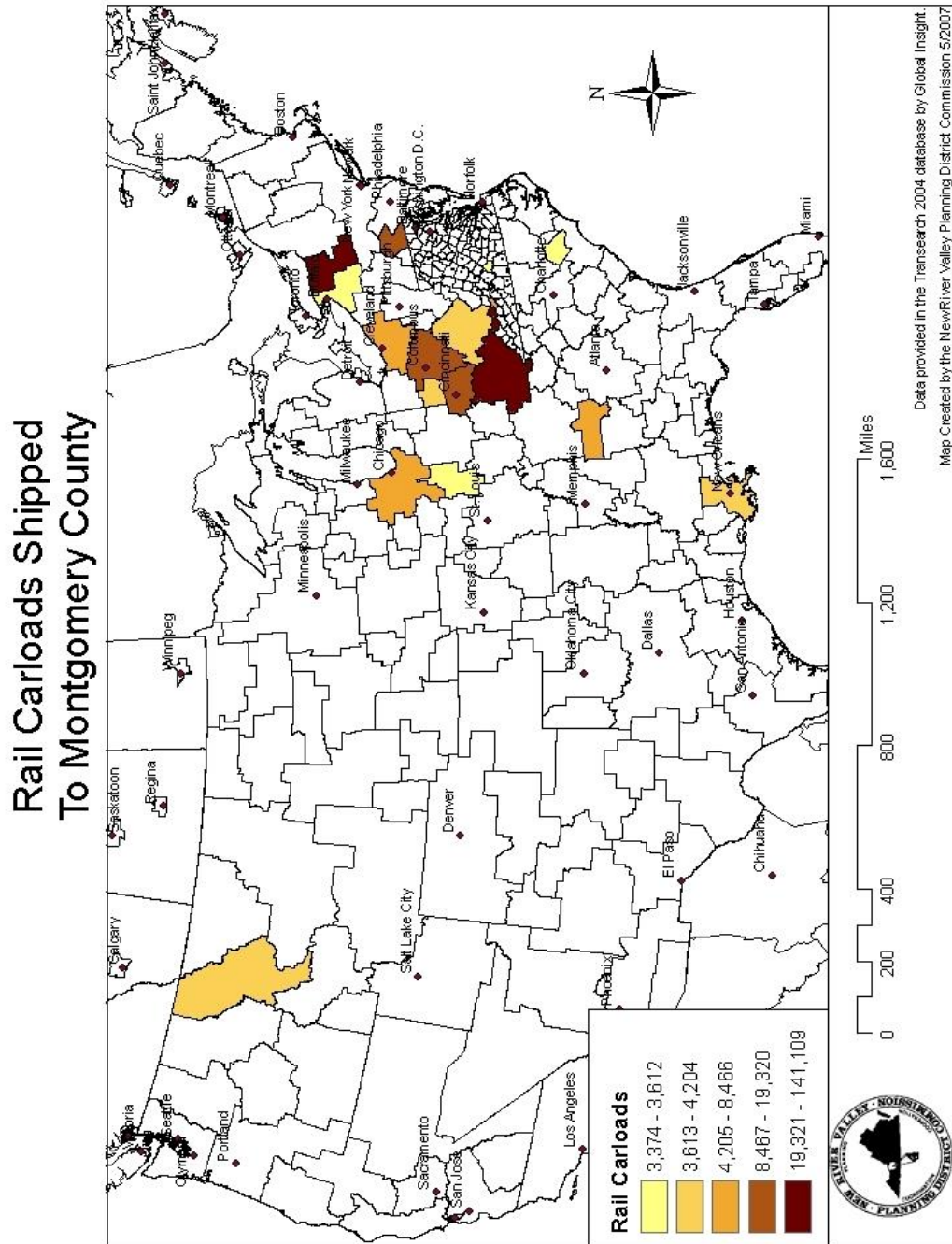
Rail freight per tonnage within the New River Valley region is predominantly based around the Blacksburg-Christiansburg-Montgomery MPO Area (335,612.59 Car Loads inbound), and Giles County (1,271,828.67 Car Loads inbound). Additional rail transportation support is handled in Pulaski County (3,992 Car Loads inbound). Exhibit 10 shows this relationship, and additional tables can be found in the Appendix.

Exhibit 10: Freight Traffic on Rails



Data obtained from Trans-search 2004 Virginia Freight Flows (Global Insight) shows that most freight entering Montgomery County via rail is coming from within a 300 Mile radius. Exhibit 11 illustrates this relationship.

Exhibit 11: Rail Loads Sent to Montgomery County Nationally



The areas shown that ship to Montgomery County are primarily in the industrial centers in the Northeast and Midwest. These areas include West Virginia, Eastern Tennessee, Ohio, portions of New York (Buffalo and Western Upstate New York) and Central Pennsylvania (York, Harrisburg, and Lebanon). Additionally, areas near Chicago IL, Milwaukee WI, Charlotte NC, St. Louis MO, New Orleans LA, and Western Montana also contribute to the rail freight shipped to Montgomery County. Primarily these areas are shipping industrial products which are then used to create additional products that are shipped out of the region as shown in prior sections.

Air Freight in the Region

Air freight is an important component of freight handling in the region. Air freight is focused on small, high value components.

During the period FY01 through FY08 commercial operations at the New River Valley Airport accounted for 3,368 flights, moving 636,177 pounds of air cargo and 8,815 persons. Of these operations it is estimated that 30% have Montgomery County, and likely the MPO area, as the origin or destination. Exhibit 12 provides a month to month review of the air operations over the period.

The New River Valley airport is well positioned to continue providing traditional services as well as to expand into international goods. The airport has the fifth longest runway in the Commonwealth and the only one which is located adjacent to major industrial lands and the only one west of Richmond which has US Customs services at the airport and is served by Foreign Trade Zone designation.

Survey

To determine the actual freight conditions that business and industry are confronted with in the New River Valley region, a survey was developed and distributed to industrial stakeholders. Seventeen companies completed the three page survey. Generally the results from this survey are not intended to be scientific but are useful for determining policies that can be utilized for improving freight transportation. These policies are applicable to the Blacksburg-Christiansburg-Montgomery MPO Area and the Salem District when coupled with other freight studies.

These surveys were compiled with comments coming from the following Companies:

Federal Mogul	Untied Pet Group	Millwork Supply
Moog Components	Wolverine Gasket	C&S Door
Prestar Packaging	Marshall Concrete	Hubbell Lighting
Corning Glass	Alliant Tech	James Hardie
Danaher Motion	Intermet	Aspen Motion
Hollingsworth & Vose	Premier Transfer & Storage	Chemical Lime

The analysis conducted via the survey includes general questions (type of business), transportation questions (modal use) and open ended freight issue questions (within Virginia what are the most significant challenges your business or facility faces in freight movement).

Information contained within the surveys show a general trend with 100% of respondents utilizing truck transit systems and over 30% utilizing rail and/or air transportation. Regional transportation generally flowed along U.S. Interstate 81 with multiple inter and intra state flows. Major concerns associated with truck freight were not evident from the survey with the exception of access issues, road capacity, and load limits on area bridges.

Air and rail freight transportation were of concern to manufactures that were surveyed. Those that utilize air transportation noted problems associated with the lack of facilities in the area specifically the need to transport the freight to larger airports (Charlotte Douglas International Airport Charlotte NC, and Hartsfield-Jackson Atlanta International Airport Atlanta GA)

Surveys also indicate concerns with freight transportation in the region. These comments are coupled with moving goods between modes and the importing/exporting process. Solutions expressed in the surveys equate to more investment in local, regional, state, and national transportation systems. At the time of the survey implementation date (2007-2008) many companies experienced growth or were preparing for manufacturing which will require additional freight resources in the future.

Proposals

All three facets of freight transportation can be updated to provide maximum efficiency. The main area of concern that was identified from the surveys was the need for increased road capacity for truck freight. U.S. Interstate 81 is the main access route for inbound and outbound freight for the Blacksburg-Christiansburg-Montgomery Area. For this route widening of the roadway is the most effective method of increasing capacity. By increasing the total number of lanes additional capacity is easily and effectily created. This is already in practice in portions of the Blacksburg-Christiansburg-Montgomery Area, and would be most effective if utilized throughout the entire MPO area on U.S. Interstate 81.

Rail transportation is currently growing in the area and will continue with the addition of the Intermodal facility planned for Elliston. This facility will expand the opportunities for transfers in the region. With this addition there will be more opportunities for industry to utilize rail transportation for their expanding freight needs, and will also allow freight that was previously transported via truck to be placed into the rail network, thus alleviating strain on the area roadways. One area of the rail transportation network that will need to be examined is the number of “at grade” crossings that are in the region, particularly those that are in Christiansburg. These crossings will need to be updated to provide a safe and reliable rail system.

Air transportation is the most underutilized form of freight transportation in the Blacksburg-Christiansburg-Montgomery Area. Of those that responded to the survey, none indicated that they had utilized local airports. The New River Valley Airport is a resource that is available in the region, and provides customs support. Data indicates that from September 2007 to September 2008 the Airport processed the least amount of freight as compared to the previous seven years. By utilizing this service local industry should be able to limit costs associated with shipment of freight from outlying international airports. This option should be explored and advertised to local industry.

Appendix A

Appendix B